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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,480	12/26/2001	Shinya Satou	381NP/50378	4438
23911	7590	04/07/2004	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			FERGUSON, MARISSA L	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/936,480	Applicant(s) SATO ET AL.	
	Examiner Marissa L Ferguson	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/24/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kurio (JP 11-14482).

Regarding claim 1, Kurio teaches a substrate (101), a diaphragm (111) formed on a substrate, a silicon oxide film (103) for sealing and a semiconductor pressure sensor characterized in that a polysilicon film (104b) is provided to cover part or all of a silicon oxide film.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurio (JP 11-14482).

Regarding claims 2-4, with respect to the thickness and the distance, it obvious that Kurio teaches a thickness of a polysilicon film and/or a distance of a covered part

from a filling hole . In this case, it would have been obvious to provide whatever specific thickness and distance desired including that as claimed in Kurio for the purpose of avoiding deformation. It has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

3. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurio (JP 11-14482) in view of Mitani et al. (US 5,544,529).

Regarding claim 5, Kurio teaches the a substrate (101), a diaphragm (111) formed on a substrate, a silicon oxide film for sealing (103) and a semiconductor pressure sensor characterized in that a polysilicon film (104b) is provided to cover part or all of a silicon oxide film and a detector providing an input with a correction circuit (233 and figure 13). However he does not explicitly disclose a package enclosing a correction circuit and an intake tube used for introducing an external pressure. Mitani et al. teaches a pressure sensor that discloses a package enclosing a correction circuit (30) and an intake tube used for introducing an external pressure (1) used for detecting a pressure.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Kurio to include the elements as taught by for Mitani et al., since Mitani et al. uses a pressure sensitive element as for detecting an atmospheric pressure.

Regarding claims 6-8, with respect to the thickness and the distance, Kurio does not teach the claimed thickness of the polysilicon film and/or a distance of the covering part from the filling hole. In this case, to provide whatever specific thickness and distance desired including that as claimed in Kurio for the purpose of avoiding deformation. It has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 9, Kurio teaches the invention with the exception of output terminals comprising a pad on a circuit connected by a metal wire. Mitani et al. teaches output terminals (29,39) comprising a pad on a circuit connected by a metal wire (Column 5, Lines 42-47 and Figure 4) used for electrical connections. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Kurio to include the terminals and pads as taught by Mitani et al., since Mitani et al. uses the members for electrically connecting the apparatus.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurio (JP 11-14482) in view of Sakai et al. (US 6,388,279).

Kurio teaches a substrate (101), a diaphragm (111) formed on a substrate, a silicon oxide film (103) for sealing and a semiconductor pressure sensor characterized in that a polysilicon film (104b) is provided to cover part or all of a silicon oxide film. However, he does not explicitly disclose a gap located between a diaphragm and a substrate. Sakai et al. teaches a semiconductor pressure sensor with a gap (16)

located between a diaphragm (20) and a substrate (15). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Kurio to include locating a gap between a diaphragm and substrate as taught by Sakai et al., since Sakai et al. teaches the specific location for the purpose of providing a vacuumed sealed chamber.

Response to Arguments

5. Applicant's arguments filed 12/19/03 regarding claims 1-9 have been fully considered but they are not persuasive. In response to applicant's argument that neither Kurio nor Mitani et al. teaches "a silicon oxide film for sealing an etchant filling hole", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The silicon oxide film taught by Kurio is fully capable of filling a hole.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (703)

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305-3194. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Marissa L Ferguson
Examiner
Art Unit 2854

NAH

Charles H. Nolan, Jr.
Primary Examiner
Tech Center 2800